

Claims

What is claimed is:

1. A method, in a multi-dimensional electronic data table comprising a plurality of data, for managing insertion operations in a recursive scalable template instance; a recursive scalable template instance comprising a variable number of contiguous recursive element instances ordered and aligned along a first data table dimension and structured according to a recursive scalable template; said recursive scalable template comprising a recursive element including one or a plurality of scalable templates; each recursive element instance having a variable size along said first data table dimension and a same size along a second data table dimension; a recursive element instance comprising one or a plurality of scalable template instances; each scalable template instance of each recursive element instance being aligned along said first data table dimension; each scalable template instance within each recursive element instance being aligned along a second data table dimension; a scalable template instance comprising a variable number of elements structured according to a scalable template; an element being defined as a range of data; a range of data comprising one or a plurality of data; said method comprising the steps of:
 - detecting an insert command for inserting one or a plurality of contiguous elements after or before a selected element in a scalable template instance of a recursive element instance;
 - identifying :
 - the scalable template instance where to insert said one or a plurality of elements;
 - the selected element, in the scalable template instance, after which or before which the one or plurality of elements have to be inserted;
 - the scalable template associated with said scalable template instance;
 - identifying :
 - the recursive scalable template instance and the recursive element instance comprising the identified scalable template instance;
 - inserting in the identified scalable template instance, after or before said selected element, one or a plurality of elements structured according to the scalable template associated with said scalable template instance;
 - adjusting the size of the identified recursive element instance along said first data table dimension according to the size of the largest scalable template instance in said recursive element instance, all recursive element instances of the identified recursive scalable template instance remaining contiguous without overlapping.
2. The method according to the preceding claim wherein said recursive scalable template instance further comprises a header part and/or a footer part; the header part of the recursive scalable template comprising a predefined number of recursive meta-elements; the footer part of the scalable template comprising a predefined number of recursive meta-elements; a recursive meta-element comprising one or a plurality of scalable templates; said method comprising the further steps of :
 - detecting an insert command for inserting one or a plurality of contiguous elements after or before a selected element in a scalable template instance of a recursive meta-element instance;
 - identifying :
 - the scalable template instance where to insert said one or a plurality of elements;
 - the selected element, in the scalable template instance, after which or before which the one or plurality of elements have to be inserted;
 - the scalable template associated with said scalable template instance;
 - identifying :
 - the recursive scalable template instance and the recursive meta-element instance comprising the identified scalable template instance;
 - inserting in the identified scalable template instance, after or before said selected element, one or a plurality of elements structured according to the scalable template associated with said scalable template instance;

- adjusting the size of the identified recursive meta-element instance along the first data table dimension according to the size of the largest scalable template instance of said recursive meta-element instance, all recursive element instances and recursive meta-element instances of the identified recursive scalable template instance remaining contiguous without overlapping.
- 5 3. The method according to any one of the preceding claims comprising the further steps of:
 - detecting an insert command for inserting in a recursive scalable template instance, one or a plurality of contiguous recursive element instances after or before a selected recursive element instance;
- 10 4. identifying :
 - the recursive scalable template instance where to insert said one or a plurality of recursive element instances;
 - the selected recursive element instance in the recursive scalable template instance, after which or before which the one or plurality of recursive element instances have to be inserted;
 - 15 • the recursive scalable template associated with said recursive scalable template instance;
 - inserting in the recursive scalable template instance, after or before said selected recursive element instance, one or a plurality of contiguous recursive element instances;
- 20 5. aligning along the first data table dimension, the one or plurality of inserted recursive element instances with already existing one or plurality of recursive element instances; said one or plurality of inserted recursive element instances having the same size than already existing one or plurality of recursive element instances along the second data table dimension;
- 25 6. structuring each inserted recursive element instance according to the recursive element defined for the identified recursive scalable template.
- 4. The method according to the preceding claim comprising the further steps of:
 - aligning each scalable template instance of each inserted recursive element instance along said first data table dimension;
- 30 7. aligning within each inserted recursive element instance, each scalable template instance along said second data table dimension.
- 5. The method according to any one of the preceding claims wherein said step in a recursive scalable template instance of inserting one or a plurality of contiguous elements in a scalable template instance, or of inserting one or a plurality of contiguous recursive element instances, comprises the further step of :
 - determining whether this insertion corrupts any other existing recursive scalable template instance in the data table or not, a recursive scalable template instance being corrupted when the recursive element instances are no longer structured according to the associated recursive scalable template.
- 35 6. The method according to the preceding claim wherein said step of determining whether the insertion corrupts any other existing recursive scalable template instance in the data table or not, comprises the further step of:
 - cancelling the insertion if the insertion corrupts any recursive scalable template instance defined as being a critical instance.
- 40 7. The method according to the preceding claim comprising, for each recursive scalable template instance, the step of:
 - defining each of said one or plurality of recursive scalable template instances as being a critical instance or a not critical instance.
- 8. The method according to any one of the preceding claims wherein said step in a recursive scalable template instance of inserting one or a plurality of contiguous elements in a scalable template instance, or of inserting one or a plurality of contiguous recursive element instances, comprises the further step of :
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- determining whether this insertion corrupts any other existing scalable template instance in the data table or not, a scalable template instance being corrupted when the elements are no longer structured according to the associated scalable template.

5. The method according to the preceding claim wherein said step of determining whether the insertion corrupts any other existing scalable template instance in the data table or not, comprises the further step of:

- cancelling the insertion if the insertion corrupts any scalable template instance defined as being a critical instance.

10. The method according to any one of the preceding claims wherein said multidimensional electronic data table is an electronic spreadsheet comprising a plurality of cells identified by a cell address along each dimension.

11. The method according to the preceding claim wherein a scalable template instance comprises a variable number of contiguous elements of same size ordered and aligned along a given spreadsheet dimension and structured according to a scalable template; an element being defined as a range of cells; said scalable template comprising an element format and/or an element profile; an element format defining for each cell within each element, one or a plurality of format attributes; an element profile defining a cell content and a cell destination for each cell within each element; said cell destination specifying whether the cell is an input cell for receiving an entry or an output cell for producing a result.

15. 12. A system comprising means adapted for carrying out the steps of the method according to any one of the preceding claims.

13. A computer program comprising instructions for carrying out the steps of the method according to any one of claims 1 to 11, when said computer program is executed.